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TO : The Files - Contract (RD)XG-2235, W. O. 2

DATE: 14 July 1960

FROM : SUBJECT: Trip Report,

1. On 8 July 1960 the writer visited , Alexandria, Virginia to monitor the progress of W. O. 2 of Contract (RD)XG-2235. Present at the meeting were the following:



2. presented a progress report in outline form which had five main topics as follows:

- a. A statement of the problem
- b. A literature search
- c. Antenna testing and analysis
- d. Pattern evaluation
- e. Future work

The literature search resulted in the selection of a dipole array or flat top antenna as being the logical test antenna for the feasibility studies. The particular antenna used to make impedance, open-circuit voltage, and vertically polarized rejection measurements was a three

of a wavelength. A single element dipole and a ten foot whip were also used for comparison purposes.

3. Impedance measurements for heights above the ground varying from six inches to four feet, oddly enough, (416 + j81.5 ohms at 4 feet to 815 + j454 ohms at six inches) The impedance of the single element dipole mounted sixteen feet above ground was 79.5 - j31.7 ohms. The whip measured 36.8 - j122 ohms.

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4. Field strength patterns on the three element array indicate a very near optimum angle of departure for various heights above ground. Vertical component rejection ratios were obtained by using a driven loop at a distance of and comparing open circuit voltages at the terminals of the array for broadside and axial locations of the driven loop. The rejection ratio thus obtained was roughly three to one.

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5. A two week extension has been approved for completion of the project report which represents the final work on W. O. 2 Contract (RD)XG-2235. Further consideration of the ground wave suppression technique is pending receipt and evaluation of the report.



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